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#### ABSTRACT

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# CENTER FOR THE STUDY OF READING

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WHOLE LANGUAGE IN CONTEXT

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## **Abstract**

Whole language is a response to the increased knowledge base about language, literacy, and learning. Whole language educators believe that teachers should have direct access to this knowledge base and be supported in their efforts to use it to inform instructional decisions. This response stands in contrast to more traditional responses in which university educators use the knowledge base to develop instructional innovations and then try to sell teachers these innovations/methods. Debates pro and con whole language are really debates about power and control, and a commitment to teaching as informed, reflective practice necessitates rethinking the roles of university and public school educators as well as reconceptualizing the relationship between them.



## WHOLE LANGUAGE IN CONTEXT

The past 30 years have seen vast changes in literacy education, and within that period, the label "whole language" has been used to refer to a group of educators who have advocated particular kinds of change in literacy education. The whole language label, however, has been used in a variety of contexts by a variety of individuals. And, as we move across time, contexts, and individuals, it becomes clear that neither the sense (the meaning) of the label nor its referent (that to which it refers) have remained constant.

The effect of this ambiguity is sometimes disconcerting and often problematic. Battles are fought pro and con whole language, and indeed battles are even fought over what each side mistakenly thinks the other means. The reverse is also true. Sometimes language masks differences, and people think they agree about whole language when, indeed, there are major points of disagreement between them.

To understand whole language as it is currently conceptualized, and thus to disambiguate the term, it is first necessary to understand how the field of reading research has changed over the last 30 years and to consider what we have learned during that period. Second, it is essential to understand that whole language is not a particular body of knowledge or a teaching method but rather it is a response to our increased knowledge about literacy and how it develops. These understandings, in turn, enable an understanding of whole language as political agenda, provide a foundation for informed consideration of the research that has been conducted on or in whole language classrooms during the last decade, and inform our understanding of, and our own position in, the current debates over whole language.

# A Brief Overview of Recent Reading-Related Research

As Figure 1 illustrates, prior to 1960, education, psychology, linguistics, sociology, and philosophy were primarily independent fields (hence the vertical lines in the figure). Education was defined predominately as method and, within reading education, the debate centered on whether to use whole words or phonics to teach reading. Psychology was predominately behavioristic (Pavlov, 1927; Skinner, 1957; Thorndike, 1913), and linguistics generally concentrated on the surface structure of language (Bloomfield, 1933; Sapir, 1921).

#### [Insert Figure 1 about here.]

Beginning in the 1960s, both the focus of research within these fields, and the relationships among them, began to change (see Figure 2). The divisions became less rigid, and indeed new fields emerged that represented intersections between disciplines. Educational psychology moved away from behaviorism into cognitive science (Anderson, Reynolds, Schallert, & Goetz, 1977; Brown, 1980; Spiro, 1980), and linguists began to study the "deep structure" of language (Chomsky, 1957). A new field, psycholinguistics, emerged from the common interests of these two groups, and researchers in this field explored how written and oral language were learned (Brown, 1970; Goodman, 1968). Another new field, sociolinguistics, emerged from the interests shared by sociologists and linguists. Michael Halliday, Judith Green, and David Bloome, for example, all explored language as a social construction (Bloom & Green, 1984; Green, 1983; Halliday, 1975).

#### [Insert Figure 2 about here.]

As psycho- and sociolinguistics emerged and defined themselves, it became apparent that these new fields also shared common interests, with the result that some people began to call themselves socio-psycholinguists. Indeed, the socio-psycholinguistics special interest group of the International Reading Association (IRA) was established in 1977. More recently, individuals from some of these fields have



begun to tap the resources of other fields such as philosophy. Rand Spiro, for example, a cognitive psychologist and a reading researcher, draws from the work of Wittgenstein to talk of criss-crossing landscapes (Spiro, Coulson, Feltovich, & Anderson, 1988). Other researchers, such as Jerome Harste, influenced by work done in semiotics and structuralism, talk of referent and signification and refers to themselves as socio-semioticians (Harste, Woodward, & Burke, 1984).

Thus, rather than remaining separate from other disciplines, reading education has become transdisciplinary. Once limited to one field, reading research has become the domain of many. A number of linguists, cognitive psychologists, sociolinguists, and psycholinguists now consider themselves to be reading researchers; many reading researchers likewise now identify themselves with fields outside the traditional domain of reading education. The cross-disciplinary attention given to reading extends beyond the fields represented here. Literacy theorists, developmental psychologists, and clinical psychologists now also consider reading as one of their domains.

#### [Insert Figure 3 about here.]

One result of this multidisciplinary interest is that the meaning of reading has been widely expanded. Reading is now viewed as, at the least, a cognitive process, a languaging process, a social process, and a meaning-making process. From research conducted predominately but not exclusively from a cognitive psychology perspective, for example, we have learned that reading is a cognitive process. We have learned about the importance of backgr und knowledge (e.g., Anderson, Spiro, & Anderson, 1978), of self-monitoring (e.g., Brown, 1980), and of reading as a strategic process (see Goodman, Smith, Meredith, & Goodman, 1976). From research conducted predominately but not exclusively in the field of linguistics, we have learned that reading is a languaging process -- that there are cue systems in language (most notably Goodman, 1968), and that written language acquisition is rule-governed (Ferriero & Teberosky, 1983; Harste, Woodward & Burke, 1984; Read, 1975). We have also come to understand that both written and oral language are learned through use, and that use is driven by the function language serves for the user (Halliday, 1975).

In addition, we have come to understand that reading is a social process. There is now extensive research that documents the significant and necessary contributions to language development and use made by other individuals through collaboration and community (e.g., Bloome & Green, 1984; Green, 1983; Heap, 1980; Heath, 1983). Research within and across these perspectives has deepened our understanding that reading is also a meaning-making process. What we learn is encoded in language, and the meanings we construct both expand and constrain what we know (Halliday, 1975, 1978; Piattelli-Palmarini, 1979; Vygotsky, 1962).

### Response To This Research Base

This new knowledge has spurred new debates, perhaps the more public of which has been among those educators whose primary interest is in using new understandings to improve classroom practice. This debate seems to have emerged as a result of two quite different responses to the expanded knowledge base about reading. One group of educators has tended to focus on devising means for teaching everything that competent readers need to know. These educators concern themselves with such issues as how to teach students about how language works, how to teach self-monitoring, and how to teach story structure. Historically, the approach of this group has been consistent with the education-asmethod perspective. I label this approach as the dominant response.

A second group of educators has asked different questions. Rather than focus on how to teach all that we now understood about reading and readers, this group asks, "How do we set up classroom environments that will facilitate the learning of these understandings?" I label this approach as the emergent response.



The emergent response is not unique to reading education. In mathematics, science, and social studies, educators also ask how to establish classrooms that build on an understanding of how learning occurs outside the classroom. Mathematics educators do so when they talk about "authenticity," science educators do so when they talk about "process" and "hands-on" learning, and social studies educators do so when they talk about bringing the community into the classroom.

Within reading education, the emergent response is most often referred to as whole language. Consistent with the voices being raised in other curricular areas, whole language represents a commitment to school learning environments in which learning is contextualized, emergent, functional, mediated, and collaborative. Whole language advocates, like others with an emergent response perspective, want to take the optimal learning conditions found outside the classroom and make them part of the classroom.

## Whole Language as Political Agenda

Until quite recently, many reading educators from both the dominant and emergent perspectives primarily debated each other over method, terminology, and materials. One group talked of methods such as "scaffolding," "cognitive apprenticeship," and "reciprocal teaching," while the other talked of "invitations," "demonstrations," "strategy lessons," and "ownership." Some argued for using basal reading programs, and some argued against their use. Both groups claimed "literature-based" programs, and each argued that what it meant by the term was not what the other meant.

And then somewhere in the midst of this often heated debate, some educators began to realize that the debate was not about methods, terminology, or materials; rather, it was about politics and power. While both groups shared the same long-term goal of improving educational practice, they differed in very important ways. The dominant group was arguing for methods developed outside the classroom that teachers could use to teach what needed to be known; the emergent group was arguing for the enhanced professionalization of teachers so that teachers could serve as mediators and facilitators of learning within environments they designed. The dominant group was attempting to develop methods drawn from its knowledge base; the emergent group was attempting to share the knowledge base so that teachers could develop their own methods.

To illustrate the differences between these two groups, consider cooperative learning. Understanding the importance of learning communities, of cooperation and collaboration, some university educators packaged their knowledge as curricular innovation and began selling "cooperative learning" (Johnson & Johnson, 1979). Teachers all over the country attend workshops and inservice sessions based on these programs where, in some instances, they are told how many students to have in a group, what the role of each should be, and how often cooperative learning activities should take place.

Such an approach represents the dominant response to new knowledge. Knowledge is held by those outside the classroom, and teachers, rather than being given direct access to that knowledge, are sold curricular innovations. In contrast, those educators whose response can be considered emergent argue against such packages. They argue instead that teachers should have the opportunity to reflect upon and become informed about the importance of learning as a cooperative, collaborative activity and of setting up their classrooms as learning communities. With this knowledge base, they maintain, teachers can then make informed decisions about how to help their students learn from and with each other. One decision teachers might make, based on their informed reflections, would be to provide opportunities for students to work together in small groups. While the particular organization plan would be similar (in both cases students would be doing small-group work cooperatively), from the dominant perspective, teachers would be doing "cooperative learning" because they had been told, by outside others, that they should do so and how they should do so; from the emergent perspective, teachers might choose small-group experiences based on their understanding of learning as a social process.



Whether intentional or not, one effect of the dominant response perspective has been to situate authority outside the classroom, while the explicit intent of the emergent response perspective is to situate authority within the classroom.

The political ramifications of these differences in perspective are considerable. Many educators, for example, find themselves asking questions such as "What is a teacher's role in the classroom now, and what should that role be in the future?" "Who has, or should have, the power to make these decisions?" "What are the rules for determining or redistributing this power, and how can the rules be renegotiated?"

University educators, many of whom have become self-conscious about issues of teacher power and authority, are asking serious questions about the role of universities relative in changing agendas and about relationships between universities and the public schools. They also have begun to rethink the concept of research and to reconsider what constitutes proof. Indeed, they are even raising questions about "authentic" research: Is it more authentic and therefore more useful when teachers conduct research in their own classroom? Is it even necessary to address the issue of proof, or is it enough simply to understand?

## The Impact of an Empowerment Perspective

In the midst of this consciousness-raising, many, including whole language advocates, are taking the stand that any changes proposed within or about schools should only be considered legitimate and ethical if the changes would empower both teachers and students.

This position rests upon the argument that historically teachers have been treated as technicians who transmit information and lessons and vocabulary words to students — who historically have been treated as receivers. We have kept school separate from life and created a school literacy that has no counterpart outside of school. We have attempted to teach the complex by making it simple. The dominant perspective has indeed dominated.

Recent research, however, suggests that when students are empowered — when they are supported as readers, writers, and learners within the school context; when learning in school parallels learning outside of school; when learning is authentic and therefore serves a genuine function — students abandon their passive stance and begin to engage actively as learners. They begin to construct and share and build on knowledge rather than simply to receive it. Research findings from social studies and science, from writing and mathematics, from university researchers and from public school educators all attest to the benefits of students as knowledgeable reflective learners. Likewise, findings from research on teachers and teacher education detail the contributions and accomplishments of teachers who are empowered by virtue of their being informed, reflective professionals.

In the field of reading education, much of this research has focused on the classrooms of whole language teachers and on the students who learn in those classrooms (see Stephens, 1991). Some of this research has been conducted by the teachers in the classrooms. By empowering themselves with knowledge about learners and how they learn, teachers have begun to test ways of establishing classroom contexts that are consistent with what is known about learning outside of school. These teachers work to ensure that learning in their classrooms is contextualized, emergent, functional, mediated, and collaborative. The knowledge they gain through their research-on-practice contributes, in turn, to their further empowerment by allowing them to modify curriculum, instruction, and assessment. They often share findings with other teachers who then conduct their own research-on-practice.

Sometimes these teacher-researchers share their findings with a broader audience through books, chapters, journal articles, and presentations at conferences. A recent review of the research on whole



language (Stephens, 1991) revealed, for example, that 7 of the 38 studies reviewed had been conducted by teachers in their own classrooms. Another 16 studies involved university and public school teachers collaboratively conducting research in the classrooms of public school teachers. These studies document what--once the empowerment perspective is understood--might be considered "common sense:" In whole language classrooms, students are actively engaged, and therefore experience considerable growth as readers, writers, and learners.

The 10 comparative studies in this review provide several interesting findings. For example, Ribowsky (1986) studied emergent literacy among kindergarten children and compared a "code emphasis" approach with a whole language approach. Analyzing data related to the children's linguistic, orthographic, and graphophonemic literacy, she noted that "ANCOVA results revealed a significant main effect for treatment favoring the whole language group on all dependent measures" (p. 15).

Freppon (1991) studied first-grade children from four classrooms, two of which were considered to be whole language classrooms, and two in which the children received skills-based instruction. Controlling for socioeconomic status, gender, reading ability, and reading instruction, Freppon selected 24 children and studied their beliefs and understandings about reading. She also collected information about the strategies they used as readers. She found significant differences among the children. Ninety-two percent of the children in the whole language group, for example, thought that understanding the story and getting the words right were important; in the skills-based group, only 50% talked about both as important. When trying to figure out unfamiliar words, 34% of the children in the whole language group used what Freppon referred to as a "balanced cuing system" (meaning, structure, and visual cues) compared to 8% of the students in the skills-based group. Freppon also noted that the skills group tried to sound out words twice as often as the whole language group although, when they did sound out, the whole language group was more successful than their peers in the skills-based group, in spite of the fact that they had not received systematic phonics instruction. Freppon concluded that

The results... revealed differences in the understandings of these two groups of first-grade children. Responses from children in the literature group document a reflective stance, greater depth of understanding reading as a language process involving construction of meaning, and knowledge and use of a balanced cueing system. (p. 159)

Haggerty, Hiebert, and Owens (1989) examined the literacy behaviors of children in whole language and traditional second-, fourth-, and sixth-grade classrooms. They analyzed data from reading comprehension and writing assessment tests, a modification of Burke's Reading Interview (1987), and classroom observations. They found no significant differences on the writing test, although students in the fourth- and sixth- grade whole language classrooms scored approximately one standard deviation higher than the students in the traditional classroom. On the comprehension test, however, students in the whole language classrooms outperformed those in the skills-based classroom. Results from the Reading Interview also favored the students from the whole language classrooms.

#### **Current Controversies**

Our knowledge about reading and writing, about readers and writers, continues to grow. And while there is still debate about what we know (e.g., "Did so and so's study really prove X?"), and how we come to know it (e.g., "Shouldn't the study have been designed differently?"), the essence of the debate, relative to practice, centers on how that knowledge should be shared. Should teachers have direct access to the knowledge base? Should teachers themselves be the creators of the knowledge base? If so, how can this be done? What would have to change and what would that change process look like?

There are, fortunately, no mandates prescribing how each of us answers these questions. If we want to maintain control of the classroom, if we want expertise to lie outside rather then within, we at the



university can continue to debate methods and materials. Teachers can continue to ground their curricular decisions on the information provided in the materials prescribed by their principal, district, or state. And administrators can continue to censor and direct how and what is taught.

If we want control and expertise to lie within the classroom, however, everything, even our questions, change. Decontextualized comparisons between one method and another become irrelevant; teachers will choose for themselves what works best in their situation. One response, one text, will support the learning of one child today; another response or text will support another tomorrow. And comparisons between classrooms driven by publishers' materials and classrooms in which decisions are grounded in the teachers' knowledge base will become embarrassingly silly.

In reading education, whole language is a label that identifies educators who have asked themselves about the roles of teachers and of students in the learning process and have decided in favor of teacher and student empowerment. Whole language thus has come to present a belief that learning in school ought to incorporate what is known about learning outside of school; that teachers should base curricular decisions on what is known; and that teachers as professionals are entitled to a political context that empowers them as informed decision makers (adapted from Stephens, 1991).

I began this report by suggesting that disambiguating the term whole language requires an understanding of what has happened in the field over the last 30 years — the new knowledge that we have as well as the responses, both dominant and emergent, to that knowledge base. But perhaps the term becomes clear only when we each ask ourselves hard questions: Do we believe that learning in school should be grounded in what we know about learning? That teachers should have access to that knowledge? That they should be empowered to act on their informed reflections? Many have answered yes to these questions; some of the many call themselves whole language educators. Together they, and others, are working to achieve a consistency between what they believe should be and what actually is. As John Mayher (Uncommon Sense, 1990) reminds us, we believe that to fail to find a way would be to fail ourselves and our students as well as our future.



#### References

- Anderson, R. C., Reynolds, R. E., Schallert, D. L. & Goetz, E. T. (1977). Frameworks for comprehending discourse. *American Educational Research Journal*, 14, 367-381.
- Anderson, R. C., Spiro, R. J., & Anderson, M. C. (1978). Schemata as scaffolding for the representation of information in connected discourse. *American Educational Research Journal*, 15, 433-440.
- Bloome, D., & Green, J. (1984). Directions in the sociolinguistic study of reading. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthal (Eds.), Handbook of reading research (pp. 395-422). New York: Longman.
- Bloomfield, L. (1933). Language. New York: Henry Holt & Co.
- Brown, A. L. (1980). Metacognitive development and reading. In R. J. Spiro, B. C. Bruce & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 453-482). Hillsdale, NJ: Erlbaum.
- Brown, R. (1970). Psycholinguistics. New York: The Free Press.
- Burke, C. (1987). Reading interview. In Y. M. Goodman, D. J. Watson, & C. Burke (Eds.), Reading miscue inventory: Alternative procedures. New York: Richard C. Owen.
- Chomsky, N. (1957). Syntactic structures. The Hague: Mouton.
- Ferriero, E., & Teberosky, A. (1983). Literacy before schooling. Exeter, NH: Heinemann.
- Freppon, P. A. (1991). Children's concepts of the nature and purpose of reading in different instructional settings. *Journal of Reading Behavior*, 23, 139-164.
- Goodman, K. S. (1968). The psycholinguistic nature of the reading process. Detroit: Wayne State University Press.
- Goodman, K. S., Smith, E. B., Meredith, R., & Goodman, Y. M. (1976). Language and thinking in school. New York: Richard C. Owen.
- Green, J. (1983). Research on teaching as a linguistic process: A state of the art. In E. Gordon (Ed.), Review of research in education, Vol. 10, Washington, DC: American Educational Research Association.
- Haggerty, P. J., Hiebert, E. H., & Owens, M. K. (1989). Students' comprehension, writing, and perceptions in two approaches to literacy instruction. In S. McCormick & J. Zutell (Eds.), Thirty-eighth Yearbook of the National Reading Conference. Rochester, NY: National Reading Conference.
- Halliday, M. A. K. (1975) Learning how to mean: Explorations in the development of language. London: Edward Arnold Publishers.
- Halliday, M. A. K. (1978). Language as social semiotic. Baltimore, MD: University Park Press.



- Harste, J. C., Woodward, V. A., & Burke, C. L. (1984). Language stories and literacy lessons. Portsmouth, NH: Heinemann.
- Heap, J. L. (1980). What counts as reading: Limits to certainty in assessment. Curriculum Inquiry, 10, 265-292.
- Heath, S. B. (1983). Ways with words: Language, life and work in communities and classrooms. New York: Cambridge University Press.
- Johnson, D. W., & Johnson, R. T. (1979). Conflict in the classroom: Controversy and learning. Review of Educational Research, 49, 51-70.
- Mayher, J. (1990). Uncommon sense. Portsmouth, NH: Boynton/Cook.
- Pavlov, I. P. (1927). Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex. London: Oxford University Press.
- Piattelli-Palmarini, M. (1975). Language and learning: The debate between Jean Piaget and Noam Chomsky. New York: Routledge & Kegan Paul.
- Read, C. (1975). Lessons to be learned from the pre-school orthographer. In E. H. Lennenberg & E. Lennenberg (Eds.), Foundations of language development: A multidisciplinary approach (Vol. 2). New York: Academic Press.
- Ribowsky, H. (1986). The comparative effects of a code emphasis approach and a whole language approach upon emergent literacy of young children. Unpublished doctoral dissertation, New York University. (ERIC Document Reproduction Service No. ED 269 720)
- Sapir, E. (1921). Language: An introduction to the study of speech. New York: Harcourt Brace Jovanovich.
- Skinner, B. F. (1957). Verbal behavior. New York: Appleton-Century-Crofts.
- Spiro, R. J. (1980). Constructive processes in prose comprehension and recall. In R. J. Spiro, B. C. Bruce & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 245-278). Hillsdale, NJ: Erlbaum.
- Spiro, R. J., Coulson, R., Feltovich, P., Anderson, D. (1988). Cognitive flexibility theory: Advanced knowledge acquisition in ill-structured domains (Tech. Rep. No. 441). Urbana-Champaign: University of Illinois, Center for the Study of Reading.
- Stephens, D. (1990). Toward an understanding of whole language (Tech. Rep. No. 524). Urbana-Champaign: University of Illinois, Center for the Study of Reading.
- Thorndike, E. L. (1913). The psychology of learning. New York: Teachers College.
- Vygotsky, L. S. (1962). Language and thought. Cambridge, MA: The MIT Press.



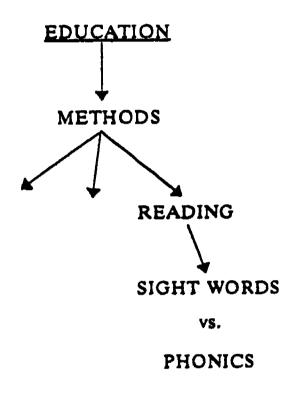
# **Author Note**

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Figure 1

PRE-1960



<u>PSYCHOLOGY</u>

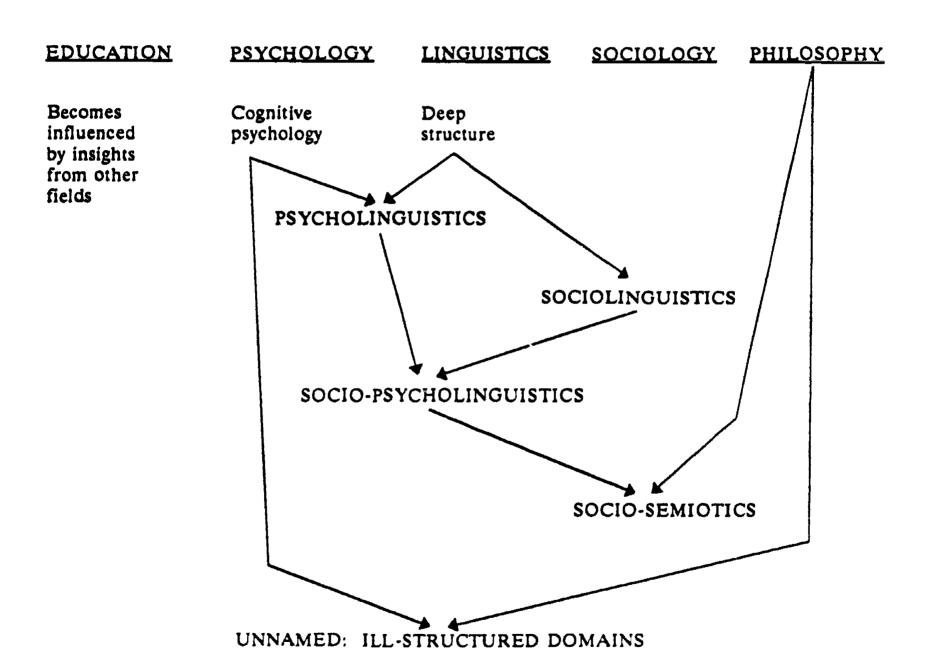
**BEHAVIORAL** 

**LINGUISTICS** 

SURFACE STRUCTURE

# Figure 2

POST-1960



# Figure 3

Reading is seen as a cognitive process

Schema

Metacognition

Strategies

Reading is seen as a linguistic process

Cue systems

Rule governed

Learned through use

Reading is seen as a social process

Contexts

Collaboration

Community

Reading is seen as a meaning-making process

Wittgenstein - ill-structured domains

Peirce - signification

